



## SEQUENCE LISTING

<110> Hastings, et al.

<120> Novel Hyaluronan-Binding Proteins and Encoding Genes

<130> PF487

<140> 09/466,778

<141> 1999-12-20

<150> 60/113,871

<151> 1998-12-23

<160> 37

<170> PatentIn Ver. 2.0

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<211> 6761

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ttc gtc cct gtc aat gaa ggc ttt gtg gac aac atg acg ctg agt ggc Phe Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr Leu Ser Gly				6082

1960	1965	1970	
cca aac ttg gag ctg cat gcc tcc aac gcc acc ctc cta agt gcc aac Pro Asn Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu Ser Ala Asn 1975	1980	1985	6130
gcc agc cag ggg aag ttg ctt ccg gcc cac tca ggc ctc agc ctc atc Ala Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu Ser Leu Ile 1990	1995	2000	6178
atc agt gac gca ggc cct gac aac agt tcc tgg gcc cct gtg gcc cca Ile Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro Val Ala Pro 2005	2010	2015	6226
ggg aca gtt gtg gtt agc cgt atc att gtg tgg gac atc atg gcc ttc Gly Thr Val Val Val Ser Arg Ile Ile Val Trp Asp Ile Met Ala Phe 2020	2025	2030	6274
aat ggc atc atc cat gct ctg gcc agc ccc ctc ctg gca ccc cca cag Asn Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala Pro Pro Gln 2040	2045	2050	6322
ccc cag gca gtg ctg gcg cnt gaa gcc cca cct gtg gcg gca ggc gtg Pro Gln Ala Val Leu Ala Xaa Glu Ala Pro Pro Val Ala Ala Gly Val 2055	2060	2065	6370
ggg gct gtg ctt gcc gct gga gca ctg ctt ggc ttg gtg gcc gga gct Gly Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val Ala Gly Ala 2070	2075	2080	6418
ctc tac ctc cgt gcc cga ggc aag ccc atg ggc ttt ggc ttc tct gcc Leu Tyr Leu Arg Ala Arg Gly Lys Pro Met Gly Phe Gly Phe Ser Ala 2085	2090	2095	6466
ttc cag gcg gaa gat gat gct gat gac gan ttc tca ccg tgg caa gaa Phe Gln Ala Glu Asp Asp Ala Asp Asp Xaa Phe Ser Pro Trp Gln Glu 2100	2105	2110	6514
ggg acc aac ccc acn ttg gtn tnt gtc ccc aac cct gtc ttt ggc agc Gly Thr Asn Pro Xaa Leu Xaa Xaa Val Pro Asn Pro Val Phe Gly Ser 2120	2125	2130	6562
gac acc ttt tgt gaa ccc ttc gat gac tca ctg ctg gag gag gac ttc Asp Thr Phe Cys Glu Pro Phe Asp Asp Ser Leu Leu Glu Glu Asp Phe 2135	2140	2145	6610
cct gac acc cag agg atc ctc aca gtc aag tga cgaggctggg gctgaaagca Pro Asp Thr Gln Arg Ile Leu Thr Val Lys 2150	2155		6663
gaagcatgca cagggaggag accantttta ttgcttgtct gggtggatgg ggcaggaggg nctgagggcc tgtccccagac aatannngtn ccctcgag			6723 6761

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Thr Val Leu Val Pro Ser Val Ser Ser Phe Ser Ser Arg Thr Met Asn
   20          25          30

Ala Ser Leu Ala Gln Gln Leu Cys Arg Gln His Ile Ile Ala Gly Gln
   35          40          45

His Ile Leu Glu Asp Thr Arg Thr Gln Gln Thr Arg Arg Trp Trp Thr
   50          55          60

Leu Ala Gly Gln Glu Ile Thr Val Thr Phe Asn Gln Phe Thr Lys Tyr
   65          70          75          80

Ser Tyr Lys Tyr Lys Asp Gln Pro Gln Gln Thr Phe Asn Ile Tyr Lys
   85          90          95

Ala Asn Asn Ile Ala Ala Asn Gly Val Phe His Val Val Thr Gly Leu
  100         105         110

Arg Trp Gln Ala Pro Ser Gly Thr Pro Gly Asp Pro Lys Arg Thr Ile
  115         120         125

Gly Gln Ile Leu Ala Ser Thr Glu Ala Phe Ser Arg Phe Glu Thr Ile
  130         135         140

Leu Glu Asn Cys Gly Leu Pro Ser Ile Leu Asp Gly Pro Gly Pro Phe
 145         150         155         160

Thr Val Phe Ala Pro Ser Asn Glu Ala Val Asp Ser Leu Arg Asp Gly
 165         170         175

Arg Leu Ile Tyr Leu Phe Thr Ala Gly Leu Ser Lys Leu Gln Glu Leu
 180         185         190

Val Arg Tyr His Ile Tyr Asn His Gly Gln Leu Thr Val Glu Lys Leu
 195         200         205

Ile Ser Lys Gly Arg Ile Leu Thr Met Ala Asn Gln Val Leu Ala Val
 210         215         220

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Asn Ile Ser Glu Glu Gly Arg Ile Leu Leu Gly Pro Glu Gly Val Pro  
 225 230 235 240  
 Leu Gln Arg Val Asp Val Met Ala Ala Asn Gly Val Ile His Met Leu  
 245 250 255  
 Asp Gly Ile Leu Leu Pro Pro Thr Ile Leu Pro Ile Leu Pro Lys His  
 260 265 270  
 Cys Ser Glu Glu Gln His Lys Ile Val Ala Gly Ser Cys Val Asp Cys  
 275 280 285  
 Gln Ala Leu Asn Thr Ser Thr Cys Pro Pro Asn Ser Val Lys Leu Asp  
 290 295 300  
 Ile Phe Pro Lys Glu Cys Val Tyr Ile His Asp Pro Thr Gly Leu Asn  
 305 310 315 320  
 Val Leu Lys Lys Gly Cys Ala Ser Tyr Cys Asn Gln Thr Ile Met Glu  
 325 330 335  
 Gln Gly Cys Cys Lys Gly Phe Phe Gly Pro Asp Cys Thr Gln Cys Pro  
 340 345 350  
 Gly Gly Phe Ser Asn Pro Cys Tyr Gly Lys Gly Asn Cys Ser Asp Gly  
 355 360 365  
 Ile Gln Gly Asn Gly Ala Cys Leu Cys Phe Pro Asp Tyr Lys Gly Ile  
 370 375 380  
 Ala Cys His Ile Cys Ser Asn Pro Asn Lys His Gly Glu Gln Cys Gln  
 385 390 395 400  
 Glu Asp Cys Gly Cys Val His Gly Leu Cys Asp Asn Arg Pro Gly Ser  
 405 410 415  
 Gly Gly Val Cys Gln Gln Gly Thr Cys Ala Pro Gly Phe Ser Gly Arg  
 420 425 430  
 Phe Cys Asn Glu Ser Met Gly Asp Cys Gly Pro Thr Gly Leu Ala Gln  
 435 440 445  
 His Cys His Leu His Ala Arg Cys Val Ser Gln Glu Gly Val Ala Arg  
 450 455 460  
 Cys Arg Cys Leu Asp Gly Phe Glu Gly Asp Gly Phe Ser Cys Thr Pro  
 465 470 475 480  
 Ser Asn Pro Cys Ser His Pro Asp Arg Gly Gly Cys Ser Glu Asn Ala  
 485 490 495  
 Glu Cys Val Pro Gly Ser Leu Gly Thr His His Cys Thr Cys His Lys  
 500 505 510  
 Gly Trp Ser Gly Asp Gly Arg Val Cys Val Ala Ile Asp Glu Cys Glu  
 515 520 525  
 Leu Asp Val Arg Gly Gly Cys His Thr Asp Ala Leu Cys Ser Tyr Val  
 530 535 540  
 Gly Pro Gly Gln Ser Arg Cys Thr Cys Lys Leu Gly Phe Ala Gly Asp  
 545 550 555 560  
 Gly Tyr Gln Cys Ser Pro Ile Asp Pro Cys Arg Ala Gly Asn Gly Gly

565	570	575
Cys His Gly Leu Glu Leu Glu Ala Asn Ala His Phe Ser Ile Phe Tyr 580	585	590
Gln Trp Leu Lys Ser Ala Gly Ile Thr Leu Pro Ala Asp Arg Arg Val 595	600	605
Thr Ala Leu Val Pro Ser Glu Ala Ala Val Arg Gln Leu Ser Pro Glu 610	615	620
Asp Arg Ala Phe Trp Leu Gln Pro Arg Thr Leu Pro Asn Leu Val Arg 625	630	635
Ala His Phe Leu Gln Gly Ala Leu Phe Glu Glu Glu Leu Ala Arg Leu 645	650	655
Gly Gly Gln Glu Val Ala Thr Leu Asn Pro Thr Thr Arg Trp Glu Ile 660	665	670
Arg Asn Ile Ser Gly Arg Val Trp Val Gln Asn Ala Ser Val Asp Val 675	680	685
Ala Asp Leu Leu Ala Thr Asn Gly Val Leu His Ile Leu Ser Gln Val 690	695	700
Leu Leu Pro Pro Arg Gly Asp Val Pro Gly Gly Gln Gly Leu Leu Gln 705	710	715
Gln Leu Asp Leu Val Pro Ala Phe Ser Leu Phe Arg Glu Leu Leu Gln 725	730	735
His His Gly Leu Val Pro Gln Ile Glu Ala Ala Thr Ala Tyr Thr Ile 740	745	750
Phe Val Pro Thr Asn Arg Ser Leu Glu Ala Gln Gly Asn Ser Ser His 755	760	765
Leu Asp Ala Asp Thr Val Arg His His Val Val Leu Gly Glu Ala Leu 770	775	780
Ser Met Glu Thr Leu Arg Lys Gly Gly His Arg Asn Ser Leu Leu Gly 785	790	795
Pro Ala His Trp Ile Val Phe Tyr Asn His Ser Gly Gln Pro Glu Val 805	810	815
Asn His Val Pro Leu Glu Gly Pro Met Leu Glu Ala Pro Gly Arg Ser 820	825	830
Leu Ile Gly Leu Ser Gly Val Leu Thr Val Gly Ser Ser Arg Cys Leu 835	840	845
His Ser His Ala Glu Ala Leu Arg Glu Lys Cys Val Asn Cys Thr Arg 850	855	860
Arg Phe Arg Cys Thr Gln Gly Phe Gln Leu Gln Asp Thr Pro Arg Lys 865	870	875
Ser Cys Val Tyr Arg Ser Gly Phe Ser Phe Ser Arg Gly Cys Ser Tyr 885	890	895
Thr Cys Ala Lys Lys Ile Gln Val Pro Asp Cys Cys Pro Gly Phe Phe 900	905	910

Gly Thr Leu Cys Glu Pro Cys Pro Gly Gly Leu Gly Gly Val Cys Ser  
 915 920 925  
 Gly His Gly Gln Cys Gln Asp Arg Phe Leu Gly Ser Gly Glu Cys His  
 930 935 940  
 Cys His Glu Gly Phe His Gly Thr Ala Cys Glu Val Cys Glu Leu Gly  
 945 950 955 960  
 Arg Tyr Gly Pro Asn Cys Thr Gly Val Cys Asp Cys Ala His Gly Leu  
 965 970 975  
 Cys Gln Glu Gly Leu Gln Gly Asp Gly Ser Cys Val Cys Asn Val Gly  
 980 985 990  
 Trp Gln Gly Leu Arg Cys Asp Gln Lys Ile Thr Ser Pro Gln Cys Pro  
 995 1000 1005  
 Arg Lys Cys Asp Pro Asn Ala Asn Cys Val Gln Asp Ser Ala Gly Ala  
 1010 1015 1020  
 Ser Thr Cys Ala Cys Ala Ala Gly Tyr Ser Gly Asn Gly Ile Phe Cys  
 1025 1030 1035 1040  
 Ser Glu Val Asp Pro Cys Ala His Gly His Gly Gly Cys Ser Pro His  
 1045 1050 1055  
 Ala Asn Cys Thr Lys Val Ala Pro Gly Gln Arg Thr Cys Thr Cys Gln  
 1060 1065 1070  
 Asp Gly Tyr Met Gly Asp Gly Glu Leu Cys Gln Glu Ile Asn Ser Cys  
 1075 1080 1085  
 Leu Ile His His Gly Gly Cys His Ile His Ala Glu Cys Ile Pro Thr  
 1090 1095 1100  
 Gly Pro Gln Gln Val Ser Cys Ser Cys Arg Glu Gly Tyr Ser Gly Asp  
 1105 1110 1115 1120  
 Gly Ile Arg Thr Cys Glu Leu Leu Asp Pro Cys Ser Lys Asn Asn Gly  
 1125 1130 1135  
 Gly Cys Ser Pro Tyr Ala Thr Cys Lys Ser Thr Gly Asp Gly Gln Arg  
 1140 1145 1150  
 Thr Cys Thr Cys Asp Thr Ala His Thr Val Gly Asp Gly Leu Thr Cys  
 1155 1160 1165  
 Arg Ala Arg Val Gly Leu Glu Leu Leu Arg Asp Lys His Ala Ser Phe  
 1170 1175 1180  
 Phe Ser Leu Arg Leu Leu Glu Tyr Lys Glu Leu Lys Gly Asp Gly Pro  
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 Phe Thr Ile Phe Val Pro His Ala Asp Leu Met Ser Asn Leu Ser Gln  
 1205 1210 1215  
 Asp Glu Leu Ala Arg Ile Arg Ala His Arg Gln Leu Val Phe Arg Tyr  
 1220 1225 1230  
 His Val Val Gly Cys Arg Arg Leu Arg Ser Glu Asp Leu Leu Glu Gln  
 1235 1240 1245

Gly Tyr Ala Thr Ala Leu Ser Gly His Pro Leu Arg Phe Ser Glu Arg  
 1250 1255 1260  
 Glu Gly Ser Ile Tyr Leu Asn Asp Phe Ala Arg Val Val Ser Ser Asp  
 1265 1270 1275 1280  
 His Glu Ala Val Asn Gly Ile Leu His Phe Ile Asp Arg Val Leu Leu  
 1285 1290 1295  
 Pro Pro Glu Ala Leu His Trp Glu Pro Asp Asp Ala Pro Ile Pro Arg  
 1300 1305 1310  
 Arg Asn Val Thr Ala Ala Ala Gln Gly Phe Gly Tyr Lys Ile Phe Ser  
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 Gly Leu Leu Lys Val Ala Gly Leu Leu Pro Leu Leu Arg Glu Ala Ser  
 1330 1335 1340  
 His Arg Pro Phe Thr Met Leu Trp Pro Thr Asp Ala Ala Phe Arg Ala  
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 Leu Pro Pro Asp Arg Gln Ala Trp Leu Tyr His Glu Asp His Arg Asp  
 1365 1370 1375  
 Lys Leu Ala Ala Ile Leu Arg Gly His Met Ile Arg Asn Val Glu Ala  
 1380 1385 1390  
 Leu Ala Ser Asp Leu Pro Asn Leu Gly Pro Leu Arg Thr Met His Gly  
 1395 1400 1405  
 Thr Pro Ile Ser Phe Ser Cys Ser Arg Thr Arg Pro Gly Glu Leu Met  
 1410 1415 1420  
 Val Gly Glu Asp Asp Ala Arg Ile Val Gln Arg His Leu Pro Phe Glu  
 1425 1430 1435 1440  
 Gly Gly Leu Ala Tyr Gly Ile Asp Gln Leu Leu Glu Pro Pro Gly Leu  
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 Gly Ala Arg Cys Asp His Phe Glu Thr Arg Pro Leu Arg Leu Asn Thr  
 1460 1465 1470  
 Cys Ser Ile Cys Gly Leu Glu Pro Pro Cys Pro Glu Gly Ser Gln Glu  
 1475 1480 1485  
 Gln Gly Ser Pro Glu Ala Cys Trp Arg Phe Tyr Pro Lys Phe Trp Thr  
 1490 1495 1500  
 Ser Pro Pro Leu His Ser Leu Gly Leu Arg Ser Val Trp Val His Pro  
 1505 1510 1515 1520  
 Ser Leu Trp Gly Arg Pro Gln Gly Leu Gly Arg Gly Cys His Arg Asn  
 1525 1530 1535  
 Cys Val Thr Thr Trp Lys Pro Ser Cys Cys Pro Gly His Tyr Gly  
 1540 1545 1550  
 Ser Glu Cys Gln Ala Cys Pro Gly Gly Pro Ser Ser Pro Cys Ser Asp  
 1555 1560 1565  
 Arg Gly Val Cys Met Asp Gly Met Ser Gly Ser Gly Gln Cys Leu Cys  
 1570 1575 1580  
 Arg Ser Gly Phe Ala Gly Thr Ala Cys Glu Leu Cys Ala Pro Gly Ala

1585	1590	1595	1600
Phe Gly Pro His Cys Gln Ala Cys Arg Cys		Thr Val His Gly Arg Cys	
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Asp Glu Gly Leu Gly Gly Ser Gly Ser Cys Phe Cys Asp Glu Gly Trp			
1620	1625	1630	
Thr Gly Pro Arg Cys Glu Val Gln Leu Glu Leu Gln Pro Val Cys Thr			
1635	1640	1645	
Pro Pro Cys Ala Pro Glu Ala Val Cys Arg Ala Gly Asn Ser Cys Glu			
1650	1655	1660	
Cys Ser Leu Gly Tyr Glu Gly Asp Gly Arg Val Cys Thr Val Ala Asp			
1665	1670	1675	1680
Leu Cys Gln Asp Gly His Gly Gly Cys Ser Glu His Ala Asn Cys Ser			
1685	1690	1695	
Gln Val Gly Thr Met Val Thr Cys Thr Cys Leu Pro Asp Tyr Glu Gly			
1700	1705	1710	
Asp Gly Trp Ser Cys Arg Ala Arg Asn Pro Cys Thr Asp Gly His Arg			
1715	1720	1725	
Gly Gly Cys Ser Glu His Ala Asn Cys Leu Ser Thr Gly Leu Asn Thr			
1730	1735	1740	
Arg Arg Cys Glu Cys His Ala Gly Tyr Val Gly Asp Gly Leu Gln Cys			
1745	1750	1755	1760
Leu Glu Glu Ser Glu Pro Pro Val Asp Arg Cys Leu Gly Gln Pro Pro			
1765	1770	1775	
Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His Phe Gln Glu Lys			
1780	1785	1790	
Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly Pro Tyr Gly Leu			
1795	1800	1805	
Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln Gly Ala Val Leu			
1810	1815	1820	
Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu Gly Phe His Leu			
1825	1830	1835	1840
Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala His Pro Val Val			
1845	1850	1855	
Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly Ile Val Ser Leu			
1860	1865	1870	
Gly Ala Arg Lys Asn Leu Ser Glu Arg Trp Asp Ala Tyr Cys Phe Arg			
1875	1880	1885	
Val Gln Asp Val Ala Cys Arg Cys Arg Asn Gly Phe Val Gly Asp Gly			
1890	1895	1900	
Ile Ser Thr Cys Asn Gly Lys Leu Leu Asp Val Leu Ala Ala Thr Ala			
1905	1910	1915	1920
Asn Phe Ser Thr Phe Tyr Gly Met Leu Leu Gly Tyr Ala Asn Ala Thr			
1925	1930	1935	

Gln Arg Gly Leu Asp Phe Leu Asp Phe Leu Asp Asp Glu Leu Thr Tyr  
 1940 1945 1950  
 Lys Thr Leu Phe Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr  
 1955 1960 1965  
 Leu Ser Gly Pro Asn Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu  
 1970 1975 1980  
 Ser Ala Asn Ala Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu  
 1985 1990 1995 2000  
 Ser Leu Ile Ile Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro  
 2005 2010 2015  
 Val Ala Pro Gly Thr Val Val Val Ser Arg Ile Ile Val Trp Asp Ile  
 2020 2025 2030  
 Met Ala Phe Asn Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala  
 2035 2040 2045  
 Pro Pro Gln Pro Gln Ala Val Leu Ala Xaa Glu Ala Pro Pro Val Ala  
 2050 2055 2060  
 Ala Gly Val Gly Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val  
 2065 2070 2075 2080  
 Ala Gly Ala Leu Tyr Leu Arg Ala Arg Gly Lys Pro Met Gly Phe Gly  
 2085 2090 2095  
 Phe Ser Ala Phe Gln Ala Glu Asp Asp Ala Asp Asp Xaa Phe Ser Pro  
 2100 2105 2110  
 Trp Gln Glu Gly Thr Asn Pro Xaa Leu Xaa Xaa Val Pro Asn Pro Val  
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 2145 2150 2155

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 35 40 45  
 Lys Gly His Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly  
 50 55 60  
 Tyr Val Lys Gly Asn Cys Gly Gly Lys Thr Gly Asp Tyr Gly Arg Asn  
 65 70 75 80

Arg Ser Arg Trp Asp Ala Tyr Cys Tyr Asn His Ala Lys Cys Gly Gly  
                   85                         90                         95  
 Val Thr Asp Lys Arg Lys Ser Gly Asn Tyr Asp Asn Cys Tyr Trp His  
                   100                     105                         110  
 Arg Lys Tyr Gly Arg His Ser Asp Asp Asp Gly Cys Ala Asp Tyr  
                   115                     120                         125  
 Val Tyr Asp Ser Tyr Asp Asp Val His Gly Val Gly Arg Tyr Cys Gly  
                   130                     135                         140  
 Asp Asp Asp Ser Thr Gly Asn Val Met Thr Lys Ser Asp Ala Ser Val  
                   145                     150                     155                 160  
 Thr Ala Gly Gly Lys Tyr Val Ala Met Asp Val Ser Lys Ser Ser Gly  
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 Lys Asn Thr Ser Thr Ser Thr Gly Asn Lys Asn Ala Gly Arg Ser  
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 His

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                                         1           5

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Asp Tyr Glu Gly Asp Gly Trp Ser Cys Arg Ala Arg Asn Pro Cys Thr
 10          15          20

gat ggc cac cgc ggg ggc tgc agc gag cac gcc aac tgc ttg agc acc 150
Asp Gly His Arg Gly Gly Cys Ser Glu His Ala Asn Cys Leu Ser Thr
 25          30          35          40

ggc ctg aac aca cgg cgc tgt gag tgc cac gca ggc tac gta ggc gat 198
Gly Leu Asn Thr Arg Arg Cys Glu Cys His Ala Gly Tyr Val Gly Asp
 45          50          55

gga ctg cag tgt ctg gag gag tcg gaa cca cct gtg gac cgc tgc ttg 246
Gly Leu Gln Cys Leu Glu Glu Ser Glu Pro Pro Val Asp Arg Cys Leu
 60          65          70

ggc cag cca ccg ccc tgc cac tca gat gcc atg tgc act gac ctg cac 294
Gly Gln Pro Pro Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His
 75          80          85

ttc cag gag aaa cgg gct ggc gtt ttc cac ctc cag gcc acc agc ggc 342
Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly
 90          95          100

cct tat ggt ctg aac ttt tcg gag gct gag gcg gca tgc gaa gca cag 390
Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln
105         110         115         120

gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag ctg 438
Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu
125         130         135

ggc ttc cac ctg tgc ctc atg ggc tgg ctg gcc aat ggc tcc act gcc 486
Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala
140         145         150

cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc 534
His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly
155         160         165

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ata gtc agc ctg ggt gcc cgc aag aac ctc tca gaa cgc tgg gat gcc		582
Ile Val Ser Leu Gly Ala Arg Lys Asn Leu Ser Glu Arg Trp Asp Ala		
170 175 180		
tac tgc ttc cgt gtg caa gat gtg gcc tgc cga tgc cga aat ggc ttc		630
Tyr Cys Phe Arg Val Gln Asp Val Ala Cys Arg Cys Arg Asn Gly Phe		
185 190 195 200		
gtg ggt gac ggg atc agc acg tgc aat ggg aag ctg ctg gat gtg ctg		678
Val Gly Asp Gly Ile Ser Thr Cys Asn Gly Lys Leu Leu Asp Val Leu		
205 210 215		
gct gcc act gcc aac ttc tcc acc ttc tat ggg atg cta ttg ggc tat		726
Ala Ala Thr Ala Asn Phe Ser Thr Phe Tyr Gly Met Leu Leu Gly Tyr		
220 225 230		
gcc aat gcc acc cag cgg ggt ctc gac ttc ctg gac ttc ctg gat gat		774
Ala Asn Ala Thr Gln Arg Gly Leu Asp Phe Leu Asp Phe Leu Asp Asp		
235 240 245		
gag ctc acg tat aag aca ctc ttc gtc cct gtc aat gaa ggc ttt gtg		822
Glu Leu Thr Tyr Lys Thr Leu Phe Val Pro Val Asn Glu Gly Phe Val		
250 255 260		
gac aac atg acg ctg agt ggc cca aac ttg gag ctg cat gcc tcc aac		870
Asp Asn Met Thr Leu Ser Gly Pro Asn Leu Glu Leu His Ala Ser Asn		
265 270 275 280		
gcc acc ctc cta agt gcc aac gcc agc cag ggg aag ttg ctt ccg gcc		918
Ala Thr Leu Leu Ser Ala Asn Ala Ser Gln Gly Lys Leu Leu Pro Ala		
285 290 295		
cac tca ggc ctc agc ctc atc atc agt gac gca ggc cct gac aac agt		966
His Ser Gly Leu Ser Leu Ile Ile Ser Asp Ala Gly Pro Asp Asn Ser		
300 305 310		
tcc tgg gcc cct gtg gcc cca ggg aca gtt gtg gtt agc cgt atc att		1014
Ser Trp Ala Pro Val Ala Pro Gly Thr Val Val Val Ser Arg Ile Ile		
315 320 325		
gtg tgg gac atc atg gcc ttc aat ggc atc atc cat gct ctg gcc agc		1062
Val Trp Asp Ile Met Ala Phe Asn Gly Ile Ile His Ala Leu Ala Ser		
330 335 340		
ccc ctc ctg gca ccc cca cag ccc cag gca gtg ctg gcg cnt gaa gcc		1110
Pro Leu Leu Ala Pro Pro Gln Pro Gln Ala Val Leu Ala Xaa Glu Ala		
345 350 355 360		
cca cct gtg gcg gca ggc gtg ggg gct gtg ctt gcc gct gga gca ctg		1158
Pro Pro Val Ala Ala Gly Val Gly Ala Val Leu Ala Ala Gly Ala Leu		
365 370 375		
ctt ggc ttg gtg gcc gga gct ctc tac ctc cgt gcc cga ggc aag ccc		1206
Leu Gly Leu Val Ala Gly Ala Leu Tyr Leu Arg Ala Arg Gly Lys Pro		
380 385 390		
atg ggc ttt ggc ttc tct gcc ttc cag gcg gaa gat gat gct gat gac		1254
Met Gly Phe Gly Phe Ser Ala Phe Gln Ala Glu Asp Asp Ala Asp Asp		
395 400 405		
gan ttc tca ccg tgg caa gaa ggg acc aac ccc acn ttg gtn tnt gtc		1302
Xaa Phe Ser Pro Trp Gln Glu Gly Thr Asn Pro Xaa Leu Xaa Xaa Val		
410 415 420		

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ccc aac cct gtc ttt ggc agc gac acc ttt tgt gaa ccc ttc gat gac      1350
Pro Asn Pro Val Phe Gly Ser Asp Thr Phe Cys Glu Pro Phe Asp Asp
425          430          435          440

tca ctg ctg gag gag gac ttc cct gac acc cag agg atc ctc aca gtc      1398
Ser Leu Leu Glu Glu Asp Phe Pro Asp Thr Gln Arg Ile Leu Thr Val
        445          450          455

aag tga cgaggctggg gctgaaagca gaagcatgca cagggaggag accantttta      1454
Lys

ttgcttgtct gggtgatgg ggcaggaggg nctgagggcc tgtccagac aatannngtn 1514
ccctcgag                                1522

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<213> Homo sapiens

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Met Val Thr Cys Thr Cys Leu Pro Asp Tyr Glu Gly Asp Gly Trp Ser
    1           5           10          15

Cys Arg Ala Arg Asn Pro Cys Thr Asp Gly His Arg Gly Gly Cys Ser
    20          25          30

Glu His Ala Asn Cys Leu Ser Thr Gly Leu Asn Thr Arg Arg Cys Glu
    35          40          45

Cys His Ala Gly Tyr Val Gly Asp Gly Leu Gln Cys Leu Glu Glu Ser
    50          55          60

Glu Pro Pro Val Asp Arg Cys Leu Gly Gln Pro Pro Pro Cys His Ser
    65          70          75          80

Asp Ala Met Cys Thr Asp Leu His Phe Gln Glu Lys Arg Ala Gly Val

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85

90

95

Phe His Leu Gln Ala Thr Ser Gly Pro Tyr Gly Leu Asn Phe Ser Glu  
 100 105 110

Ala Glu Ala Ala Cys Glu Ala Gln Gly Ala Val Leu Ala Ser Phe Pro  
 115 120 125

Gln Leu Ser Ala Ala Gln Gln Leu Gly Phe His Leu Cys Leu Met Gly  
 130 135 140

Trp Leu Ala Asn Gly Ser Thr Ala His Pro Val Val Phe Pro Val Ala  
 145 150 155 160

Asp Cys Gly Asn Gly Arg Val Gly Ile Val Ser Leu Gly Ala Arg Lys  
 165 170 175

Asn Leu Ser Glu Arg Trp Asp Ala Tyr Cys Phe Arg Val Gln Asp Val  
 180 185 190

Ala Cys Arg Cys Arg Asn Gly Phe Val Gly Asp Gly Ile Ser Thr Cys  
 195 200 205

Asn Gly Lys Leu Leu Asp Val Leu Ala Ala Thr Ala Asn Phe Ser Thr  
 210 215 220

Phe Tyr Gly Met Leu Leu Gly Tyr Ala Asn Ala Thr Gln Arg Gly Leu  
 225 230 235 240

Asp Phe Leu Asp Phe Leu Asp Asp Glu Leu Thr Tyr Lys Thr Leu Phe  
 245 250 255

Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr Leu Ser Gly Pro  
 260 265 270

Asn Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu Ser Ala Asn Ala  
 275 280 285

Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu Ser Leu Ile Ile  
 290 295 300

Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro Val Ala Pro Gly  
 305 310 315 320

Thr Val Val Val Ser Arg Ile Ile Val Trp Asp Ile Met Ala Phe Asn  
 325 330 335

Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala Pro Pro Gln Pro  
 340 345 350

Gln Ala Val Leu Ala Xaa Glu Ala Pro Pro Val Ala Ala Gly Val Gly  
 355 360 365

Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val Ala Gly Ala Leu  
 370 375 380

Tyr Leu Arg Ala Arg Gly Lys Pro Met Gly Phe Gly Phe Ser Ala Phe  
 385 390 395 400

Gln Ala Glu Asp Asp Ala Asp Asp Xaa Phe Ser Pro Trp Gln Glu Gly  
 405 410 415

Thr Asn Pro Xaa Leu Xaa Xaa Val Pro Asn Pro Val Phe Gly Ser Asp  
 420 425 430

Thr Phe Cys Glu Pro Phe Asp Asp Ser Leu Leu Glu Glu Asp Phe Pro  
     435                  440                  445  
 Asp Thr Gln Arg Ile Leu Thr Val Lys  
     450                  455

<210> 6  
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 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Met Tyr Trp Asp Thr Gly Trp Gly Lys Asp Gly His Asn Ser Trp Arg  
     1                  5                  10                  15  
 Ala Ala Gly Val Tyr His Arg Ala Arg Ser Gly Lys Tyr Lys Thr Tyr  
     20                  25                  30

Ala Ala Lys Ala Val Cys Gly Gly His Ala Thr Tyr Lys Ala Ala Arg  
     35                  40                  45

Lys Gly His Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly  
     50                  55                  60

Tyr Val Lys Gly Asn Cys Gly Gly Lys Thr Gly Asp Tyr Gly Arg Asn  
     65                  70                  75                  80

Arg Ser Arg Trp Asp Ala Tyr Cys Tyr Asn His Ala Lys Cys Gly Gly  
     85                  90                  95

Val Thr Asp Lys Arg Lys Ser Gly Asn Tyr Asp Asn Cys Tyr Trp His  
     100                  105                  110

Arg Lys Tyr Gly Arg His Ser Asp Asp Asp Asp Gly Cys Ala Asp Tyr  
     115                  120                  125

Val Tyr Asp Ser Tyr Asp Asp Val His Gly Val Gly Arg Tyr Cys Gly  
     130                  135                  140

Asp Asp Asp Ser Thr Gly Asn Val Met Thr Lys Ser Asp Ala Ser Val  
     145                  150                  155                  160

Thr Ala Gly Gly Lys Tyr Val Ala Met Asp Val Ser Lys Ser Ser Gly  
     165                  170                  175

Lys Asn Thr Ser Thr Ser Thr Gly Asn Lys Asn Ala Gly Arg Ser  
     180                  185                  190

His

<210> 7  
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cctggggacg tttggccctgg ggccccagcc tggccccgggt caccctggca tgaggag 117
atg ggc ctg ttg ctc ctg gtc cca ttg ctc ctg ctg ccc ggc tcc tac 165
Met Gly Leu Leu Leu Leu Val Pro Leu Leu Leu Pro Gly Ser Tyr
1 5 10 15

gga ctg ccc ttc tac tac ggc ttc tac tac tcc aac agc gcc aac gac 213
Gly Leu Pro Phe Tyr Tyr Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
20 25 30

cag aac cta ggc aac ggt cat ggc aaa gac cta cnt aat gga gtg aag 261
Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Xaa Asn Gly Val Lys
35 40 45

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ctg gtg gtc gag aca ccc gag gag acc ctg ttc acc tac caa ggg gcc	309
Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala	
50 55 60	
agt gtg atc ctc ccc tgc cgc tac cgc tac gag ccg gcc ctg gtc tcc	357
Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser	
65 70 75 80	
ccg cgg cgt gtc cgt aaa tgg tgg aag ctg tcg gag aac ggg gcc	405
Pro Arg Arg Val Arg Val Lys Trp Trp Lys Leu Ser Glu Asn Gly Ala	
85 90 95	
cca gag aag gac gtc gtc gtc gcc atc ggg ctg agg cac cgc tcc ttt	453
Pro Glu Lys Asp Val Leu Val Ala Ile Gly Leu Arg His Arg Ser Phe	
100 105 110	
ggg gac tac caa ggc cgc gtc cac ctg cgg cag gac aaa gag cat gac	501
Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp	
115 120 125	
gtc tcg ntg gag atc cag gnt ctg cgg ctg gag gac tat ggg cgt tac	549
Val Ser Xaa Glu Ile Gln Xaa Leu Arg Leu Glu Asp Tyr Gly Arg Tyr	
130 135 140	
cgc tgt gag gtc atn gac ggg ctg gag gat gaa agc ggt ctg gtg gag	597
Arg Cys Glu Val Xaa Asp Gly Leu Glu Asp Glu Ser Gly Leu Val Glu	
145 150 155 160	
ctg gag ctg cgg ggt gtc gtc ttt cct tac cag tcc ccc aac ggg cgc	645
Leu Glu Leu Arg Gly Val Val Phe Pro Tyr Gln Ser Pro Asn Gly Arg	
165 170 175	
tac cag ttc aac ttc cac gag ggc cag cag gtc tgt gca gag cag gct	693
Tyr Gln Phe Asn Phe His Glu Gly Gln Gln Val Cys Ala Glu Gln Ala	
180 185 190	
gcg gtg gtg gcc tcc ttt gag cag ctc ttc cgg gcc tgg gag gag ggc	741
Ala Val Val Ala Ser Phe Glu Gln Leu Phe Arg Ala Trp Glu Glu Gly	
195 200 205	
ctg gac tgg tgc aac gcg ggc tgg ctg cag gat gcc acg gtg cag tac	789
Leu Asp Trp Cys Asn Ala Gly Trp Leu Gln Asp Ala Thr Val Gln Tyr	
210 215 220	
ccc atc atg ttg ccc cgg cag ccc tgc ggt ggc ccg gac ctg gca cct	837
Pro Ile Met Leu Pro Arg Gln Pro Cys Gly Gly Pro Asp Leu Ala Pro	
225 230 235 240	
ggc gtg cga agc tac ggc ccc cgc cac cgc cgc ctg cac cgc tat gat	885
Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr Asp	
245 250 255	
gta ttc tgc ttc gct act gcc ctc arg ggg cgg gtg tac tac ctg gan	933
Val Phe Cys Phe Ala Thr Ala Leu Xaa Gly Arg Val Tyr Tyr Leu Xaa	
260 265 270	
cac cct gag aan ctg acn ctg aca naa gca agg gaa gcc tgc caa gaa	981
His Pro Glu Xaa Leu Xaa Leu Thr Xaa Ala Arg Glu Ala Cys Gln Glu	
275 280 285	
aaa t	985
Lys	

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<210> 8
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Gly Leu Pro Phe Tyr Tyr Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
    20          25           30

Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Xaa Asn Gly Val Lys
    35          40           45

Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
    50          55           60

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Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser  
 65 70 75 80  
 Pro Arg Arg Val Arg Val Lys Trp Trp Lys Leu Ser Glu Asn Gly Ala  
 85 90 95  
 Pro Glu Lys Asp Val Leu Val Ala Ile Gly Leu Arg His Arg Ser Phe  
 100 105 110  
 Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp  
 115 120 125  
 Val Ser Xaa Glu Ile Gln Xaa Leu Arg Leu Glu Asp Tyr Gly Arg Tyr  
 130 135 140  
 Arg Cys Glu Val Xaa Asp Gly Leu Glu Asp Glu Ser Gly Leu Val Glu  
 145 150 155 160  
 Leu Glu Leu Arg Gly Val Val Phe Pro Tyr Gln Ser Pro Asn Gly Arg  
 165 170 175  
 Tyr Gln Phe Asn Phe His Glu Gly Gln Gln Val Cys Ala Glu Gln Ala  
 180 185 190  
 Ala Val Val Ala Ser Phe Glu Gln Leu Phe Arg Ala Trp Glu Glu Gly  
 195 200 205  
 Leu Asp Trp Cys Asn Ala Gly Trp Leu Gln Asp Ala Thr Val Gln Tyr  
 210 215 220  
 Pro Ile Met Leu Pro Arg Gln Pro Cys Gly Gly Pro Asp Leu Ala Pro  
 225 230 235 240  
 Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr Asp  
 245 250 255  
 Val Phe Cys Phe Ala Thr Ala Leu Xaa Gly Arg Val Tyr Tyr Leu Xaa  
 260 265 270  
 His Pro Glu Xaa Leu Xaa Leu Thr Xaa Ala Arg Glu Ala Cys Gln Glu  
 275 280 285  
 Lys  
  
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 <212> PRT  
 <213> Homo sapiens  
  
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 1 5 10 15  
 Pro His Pro Asp Asn Ser Ser Leu Glu His Glu Arg Ile Ile His Ile  
 20 25 30  
 Gln Glu Glu Asn Gly Pro Arg Leu Leu Val Val Ala Glu Gln Ala Lys  
 35 40 45  
 Ile Phe Ser Gln Arg Gly Gly Asn Val Thr Leu Pro Cys Lys Phe Tyr  
 50 55 60  
 His Glu His Thr Ser Thr Ala Gly Ser Gly Thr His Lys Ile Arg Val

65	70	75	80
Lys Trp Thr Lys Leu Thr Ser Asp Tyr	Leu Lys Glu Val Asp Val Phe		
85	90		95
Val Ala Met Gly His His Arg Lys Ser Tyr Gly Lys Tyr Gln Gly Arg			
100	105		110
Val Phe Leu Arg Glu Ser Ser Glu Asn Asp Ala Ser Leu Ile Ile Thr			
115	120		125
Asn Ile Met Leu Glu Asp Tyr Gly Arg Tyr Lys Cys Glu Val Ile Glu			
130	135		140
Gly Leu Glu Asp Asp Thr Ala Val Val Ala Leu Asn Leu Glu Gly Val			
145	150		160
Val Phe Pro Tyr Ser Pro Arg Leu Gly Arg Tyr Asn Leu Asn Phe His			
165	170		175
Glu Ala Gln Gln Ala Cys Leu Asp Gln Asp Ser Ile Ile Ala Ser Phe			
180	185		190
Asp Gln Leu Tyr Glu Ala Trp Arg Ser Gly Leu Asp Trp Cys Asn Ala			
195	200		205
Gly Trp Leu Ser Asp Gly Ser Val Gln Tyr Pro Ile Thr Lys Pro Arg			
210	215		220
Glu Pro Cys Gly Gly Lys Asn Thr Val Pro Gly Val Arg Asn Tyr Gly			
225	230		240
Phe Trp Asp Lys Glu Arg Ser Arg Tyr Asp Val Phe Cys Phe Thr Ser			
245	250		255
Asn Phe Asn Gly Arg Phe Tyr Tyr Leu Ile His Pro Thr Lys Leu Thr			
260	265		270
Tyr Asp Glu Ala Val Gln Ala Cys Leu Lys Asp Gly Ala Gln Ile Ala			
275	280		285
Lys Val Gly Gln Ile Phe Ala Ala Trp Lys Leu Leu Gly Tyr Asp Arg			
290	295		300
Cys Asp Ala Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Ser			
305	310		320
Arg Pro Arg Lys Arg Cys Ser Pro Asn Glu Ala Ala Val Arg Phe Val			
325	330		335
Gly Phe Pro Asp Lys Lys His Lys Leu Tyr Gly Val Tyr Cys Phe Arg			
340	345		350
Ala Tyr Asn			
355			
<210> 10			
<211> 1259			
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<223> n equals a, t, g or c

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gccagatgct cccagaaggg cacgaaggc tcctgcagct gccagaaggg atacaaaggg 120
gacgggcaca gctgcacaga gatagacccc tgtgcagacg gccttaacgg agggtgtcac 180
gagcacgcca cctgttaag atg aca ggc ccg ggc aag cac aag tgt gag tgt 231
                           Met Thr Gly Pro Gly Lys His Lys Glu Cys

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	1	5	10	
aaa agt cac tat gtc gga gat ggg ctg aac tgt gag ccg gag cag ctg Lys Ser His Tyr Val Gly Asp Gly Leu Asn Cys Glu Pro Glu Gln Leu	15	20	25	279
ccc att gac cgc tgc tta cag gac aat ggg cag tgc cat gca gac gcc Pro Ile Asp Arg Cys Leu Gln Asp Asn Gly Gln Cys His Ala Asp Ala	30	35	40	327
aaa tgt gtc gac ctc cac ttc cag gat acc act gtt ggg gtg ttc cat Lys Cys Val Asp Leu His Phe Gln Asp Thr Thr Val Gly Val Phe His	45	50	55	375
cta cgc tcc cca ctg ggc cag tat aag ctg acc ttt gac aaa gcc aga Leu Arg Ser Pro Leu Gly Gln Tyr Lys Leu Thr Phe Asp Lys Ala Arg	60	65	70	423
gag gcc tgt gcc aac gaa gct gcg acc atg gca acc tac aac cag ctc Glu Ala Cys Ala Asn Glu Ala Ala Thr Met Ala Thr Tyr Asn Gln Leu	80	85	90	471
tcc tat nnc cag aag gcc aag tac cac ctg tgc tca gca ggc tgg ctg Ser Tyr Xaa Gln Lys Ala Lys Tyr His Leu Cys Ser Ala Gly Trp Leu	95	100	105	519
gag acc ggg cgg gtt gcc tac ccc aca gcc ttc gcc tcc cag aac tgt Glu Thr Gly Arg Val Ala Tyr Pro Thr Ala Phe Ala Ser Gln Asn Cys	110	115	120	567
ggc tct ggt gtg gtt ggg ata gtc gac tat gga cct aga ccc aac aag Gly Ser Gly Val Val Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys	125	130	135	615
agt gaa atg tgg gat gtc ttc tgc tat cgg atg aaa gat gtc aac tgc Ser Glu Met Trp Asp Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys	140	145	150	663
acc tnc aag gtc tat gtc gga gat ggc ttc tca tac agt ggg aac Thr Xaa Lys Val Gly Tyr Val Gly Asp Gly Phe Ser Tyr Ser Gly Asn	160	165	170	711
ctg ctg cag gtc ctg atg tcc ttc ccc tca ctc aca aac ttc ctg acg Leu Leu Gln Val Leu Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr	175	180	185	759
gaa gtg ctg gcc tat tcc aac agc tca gct cga ggc cgt gca ttt cta Glu Val Leu Ala Tyr Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu	190	195	200	807
gaa cac ctg act gac ctg tcc atc cgc ggc acc ctc ttt gtn cca cag Glu His Leu Thr Asp Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln	205	210	215	855
aac agt ggg ctg ggg gag aat gag acc ttg tct ggg cgg gac atc gag Asn Ser Gly Leu Gly Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu	220	225	230	903
cac cac ctc gcc aat gtc agc atg ttt ttc tac aat gac ctt gtc aat His His Leu Ala Asn Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn	240	245	250	951
ggc acc acc ctg caa acg agg ctg gga agc aag ctg ctc atc act gac Gly Thr Thr Leu Gln Thr Arg Leu Gly Ser Lys Leu Leu Ile Thr Asp				999

255	260	265	
aga cag gac cca ctc cac ccg acg gag acc agg tgt gtt gat gga aga Arg Gln Asp Pro Leu His Pro Thr Glu Thr Arg Cys Val Asp Gly Arg 270	275	280	1047
gac act ctg gag tgg gac atc tgt gcc tcc aat ggg atc aca cat gtc Asp Thr Leu Glu Trp Asp Ile Cys Ala Ser Asn Gly Ile Thr His Val 285	290	295	1095
att tcc agg yct tta aaa gca ccc cct gcc ccc gtg acc ttg ncc cac Ile Ser Arg Xaa Leu Lys Ala Pro Pro Ala Pro Val Thr Leu Xaa His 300	305	310	1143
act ggn ttg gga gna ggg atc ttc tnt gnc atc atc ctg gtg act ggg Thr Gly Leu Gly Xaa Gly Ile Phe Xaa Xaa Ile Ile Leu Val Thr Gly 320	325	330	1191
gct gtt gcc ttg gct gct tac tcc tac ttt cgg ata aac cgg aaa aca Ala Val Ala Leu Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Lys Thr 335	340	345	1239
atc ggc ttc can cat ttt ga Ile Gly Phe Xaa His Phe 350			1259

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<210> 11
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<212> PRT
<213> Homo sapiens

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   20          25          30

Leu Gln Asp Asn Gly Gln Cys His Ala Asp Ala Lys Cys Val Asp Leu
   35          40          45

His Phe Gln Asp Thr Thr Val Gly Val Phe His Leu Arg Ser Pro Leu
   50          55          60

Gly Gln Tyr Lys Leu Thr Phe Asp Lys Ala Arg Glu Ala Cys Ala Asn
   65          70          75          80

Glu Ala Ala Thr Met Ala Thr Tyr Asn Gln Leu Ser Tyr Xaa Gln Lys
   85          90          95

Ala Lys Tyr His Leu Cys Ser Ala Gly Trp Leu Glu Thr Gly Arg Val
  100         105         110

Ala Tyr Pro Thr Ala Phe Ala Ser Gln Asn Cys Gly Ser Gly Val Val
  115         120         125

Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp
  130         135         140

Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Xaa Lys Val Gly
  145         150         155         160

Tyr Val Gly Asp Gly Phe Ser Tyr Ser Gly Asn Leu Leu Gln Val Leu
  165         170         175

Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr
  180         185         190

Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp
  195         200         205

Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly
  210         215         220

Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn
  225         230         235         240

Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Thr Leu Gln
  245         250         255

Thr Arg Leu Gly Ser Lys Leu Leu Ile Thr Asp Arg Gln Asp Pro Leu
  260         265         270

His Pro Thr Glu Thr Arg Cys Val Asp Gly Arg Asp Thr Leu Glu Trp
  275         280         285

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Asp Ile Cys Ala Ser Asn Gly Ile Thr His Val Ile Ser Arg Xaa Leu  
 290 295 300  
 Lys Ala Pro Pro Ala Pro Val Thr Leu Xaa His Thr Gly Leu Gly Xaa  
 305 310 315 320  
 Gly Ile Phe Xaa Xaa Ile Ile Leu Val Thr Gly Ala Val Ala Leu Ala  
 325 330 335  
 Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Lys Thr Ile Gly Phe Xaa His  
 340 345 350  
 Phe  
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 Gly Trp Gly Phe Lys Asn Gly Ile Phe His Asn Ser Ile Trp Leu Glu  
 20 25 30  
 Gln Ala Ala Gly Val Tyr His Arg Glu Ala Arg Ala Gly Arg Tyr Lys  
 35 40 45  
 Leu Thr Tyr Ala Glu Ala Lys Ala Val Cys Glu Phe Glu Gly Gly Arg  
 50 55 60  
 Leu Ala Thr Tyr Lys Gln Leu Glu Ala Ala Arg Lys Ile Gly Phe His  
 65 70 75 80  
 Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly Tyr Pro Ile  
 85 90 95  
 Val Lys Pro Gly Pro Asn Cys Gly Phe Gly Lys Thr Gly Ile Ile Asp  
 100 105 110  
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 130 135 140  
 Ile Phe Lys Ser Pro Gly Phe Pro Asn Glu Tyr Asp Asp Asn Gln Val  
 145 150 155 160  
 Cys Tyr Trp His Ile Arg Leu Lys Tyr Gly Gln Arg Ile His Leu Ser  
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 Phe Leu Asp Phe Asp Leu Glu His Asp Pro Gly Cys Leu Ala Asp Tyr  
 180 185 190  
 Val Glu Ile Tyr Asp Ser Tyr Asp Asp Val His Gly Phe Val Gly Arg  
 195 200 205  
 Tyr Cys Gly Asp Glu Leu Pro Glu Asp Ile Ile Ser Thr Gly Asn Val  
 210 215 220  
 Met Thr Leu Lys Phe Leu Ser Asp Ala Ser Val Thr Ala Gly Gly Phe  
 225 230 235 240

Gln Ile Lys Tyr Val Thr Val Asp Pro Ala Ser Lys Ser Ser Gln Ala  
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